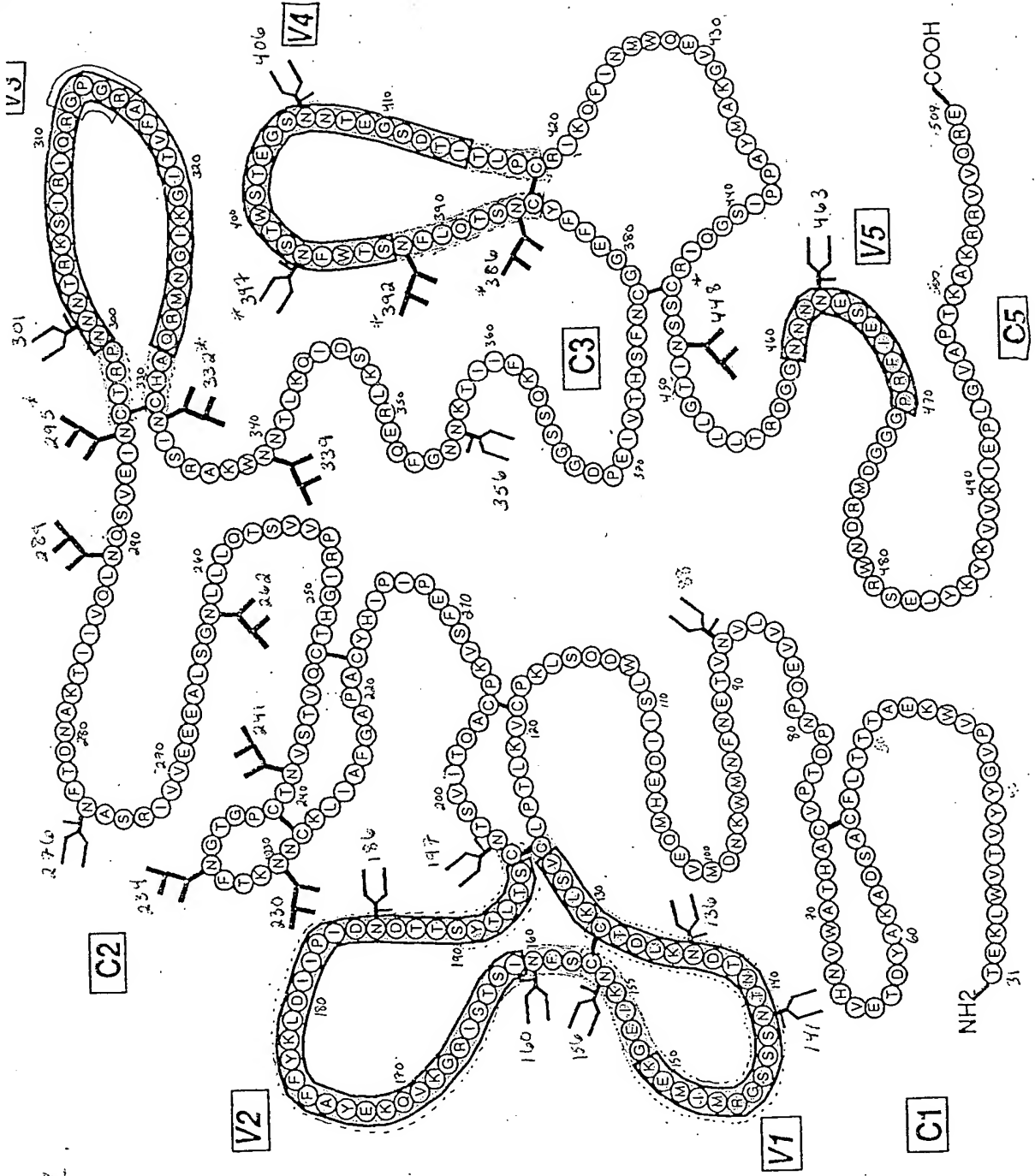


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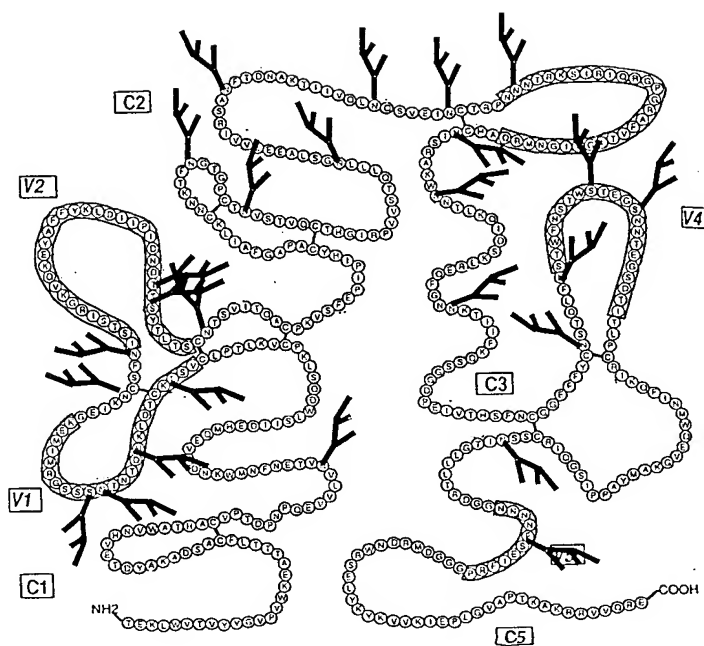
Figure 1



acid epitope
 high mannose
 complex

Figure 2

Clade B
NSI



Clade B
SI

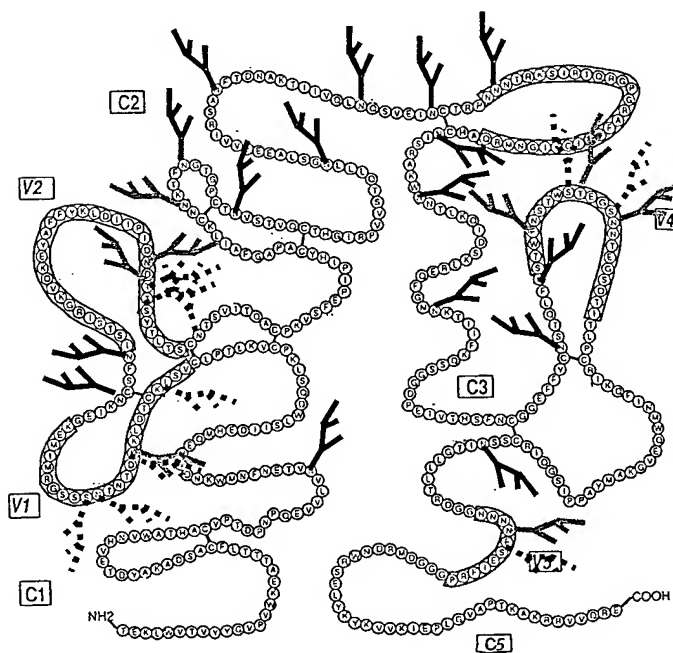
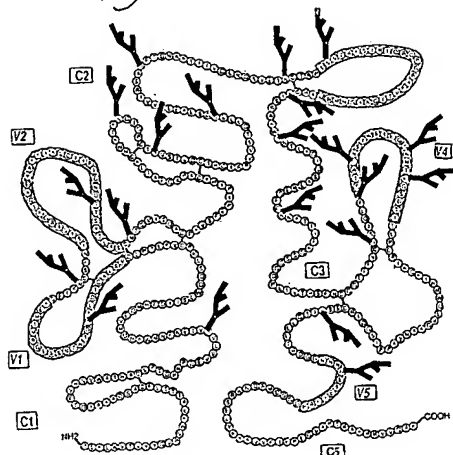
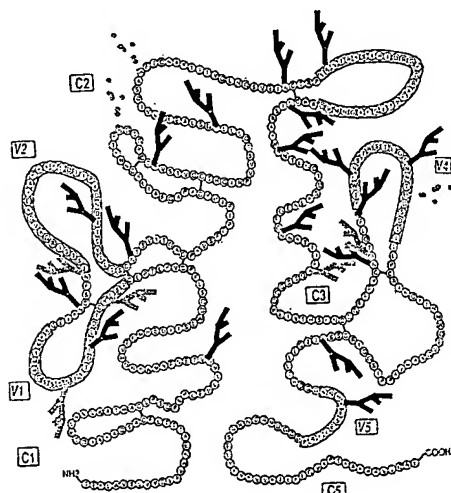


Figure 3



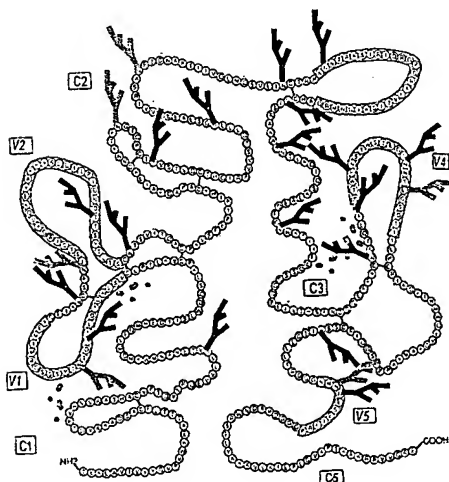
Early

- 21 original sites



Mid

- 5 sites are added
- 3 are removed



Late

- 4 sites are added
- Of the 5 sites added on the mid virus, 4 are now removed

Figure 4

A141 alignment of V1/V2

SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-35-1	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-2	.....	T.....	.....	.....	.....	.....	.....	S.
A141-35-3	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-4	.....	T.....	.....	.....	.....	.....	.....	R.
A141-35-10	.....	T.....	.....	.....	.....	.....	.....	S.
A141-35-11	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-12	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-13	.....	.....	.....	.....	.....	.....	.....	.....
A141-35-14	.....	.....	.....	.....	.....	.....	.....	.....
SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-56-1	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-2	.....	.....	D.....	.....	.....	.....	.....	.....
A141-56-3	.....	T.....	D.....	.....	.....	.....	.....	.....
A141-56-4	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-5	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-10	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-11	.....	.....	D.....	.....	.....	.....	.....	.....
A141-56-12	.....	.....	D.....	.....	.....	.....	.....	.....
A141-56-13	.....	T.....	.....	.....	.....	.....	.....	.....
A141-56-14	.....	T.....	.....	.....	.....	.....	.....	.....
SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-84-1	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
A141-84-2	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
A141-84-3	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
A141-84-4	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-84-5	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
A141-84-6	.....	N.....	.....	.....	.....	N.I..	.....	--TS..
A141-84-7	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-84-8	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	PS.RW S.
A141-84-9	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-117-1	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-2	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-3	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-4	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-5	.....	N..D.R	.....	N..S. EGKVE	.....	N.I..	D.V.....	TS.R. S.
A141-117-6	.....	N.....	.....	.....	.....	.....	.....	.....
A141-117-7	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-8	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-9	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-117-10	.....	N.....	T.....	.....	.....	.....	.....	.....
A141-117-11	.....	S.K..D	.....	N..SG RMI.EK	.....	N.I.S	D.V.....F	.....I.....
A141-117-12	.....	N..D.R	.....	N..S. EGK.E	.....	N.I..	D.V.....	TS.R. S.
A141-117-13	.....	S.K..D	.....	N..SG RMI.EK	.....	N.I.S	D.V.....F	.....I.....
A141-117-14	.....	.....	.....	D.....	.....	N.....	.....	.....
SF162	CVTLHCTNLK	NATNTKSSN-	WKEMDRGEIK	NCSFKVTTSI	RNKMQKEYAL	FYKLDVVPID	NDNTS--YKL	INC
A141-215-1	.....	.....	D.....	.....	.....	.....	.....	.....
A141-215-2	.....	.....	T.....	.....	.....	.....	.....	N.....
A141-215-3	.....	.....	.....	.....	.....	.....	.....	.....
A141-215-5	.....	.....	D.....	.....	.....	.....	.....	.....
A141-215-12	.....	.....	D.....	.....	.....	.....	.....	.....
A141-215-13	.....	.....	T.....	.....	.....	.....	.....	N.....
A141-215-14	.....	.....	T.....	.....	.....	.....	.....	N.....
A141-215-15	.....	.....	D.....	.....	.....	.....	.....	.....

Figure 5

A141 alignment of V4

SF162	CNSTQLFN	STWLN	TIGPANT	NG	TITLPC
A141-35-1					
A141-35-2					
A141-35-3					
A141-35-4					
A141-35-10					
A141-35-11					
A141-35-12					
A141-35-13					
A141-35-14					

SF162	CNSTQLFN	STWLN	TIGPANT	NG	TITLPC
A141-56-1					
A141-56-2					
A141-56-3					
A141-56-4					
A141-56-5					
A141-56-10					
A141-56-11					
A141-56-12					
A141-56-13					
A141-56-14					

SF162	CNSTQLFN	STWLN	TIGPANT	NG	TITLPC
A141-84-1		ST WMPN	D	KES	D. E. N
A141-84-2		ST WMPN	D	KES	D. E. N
A141-84-3		ST WMPN	D	KES	D. E. N
A141-84-4					
A141-84-5		ST WMPN	D	KES	D. E. N
A141-84-6		ST WMPN	D	KES	D. E. N
A141-84-7					
A141-84-8					
A141-84-9		ST WMPN	D	KES	D. E. N

SF162	CNSTQLFN	STWLN	TIGPANT	NG	TITLPC
A141-117-1		ST WMPN	D	KES	D. E. N
A141-117-2		ST WMPN	D	KES	D. E. N
A141-117-3		ST WMPN	D	KES	D. E. N
A141-117-4		ST WMPN	D	KES	D. E. N
A141-117-5		ST WMPN	D	KES	D. E. N
A141-117-6					
A141-117-7		ST WMPN	D	KES	D. E. N
A141-117-8		ST WMPN	D	KES	D. E. N
A141-117-9			S		
A141-117-10			F. S	TWS. E. S.	E. SD
A141-117-11					
A141-117-12		ST WMPN	D	KES	D. E. N
A141-117-13			F. S	TWS. E. S.	E. SD
A141-117-14					

SF162	CNSTQLFN	STWLN	TIGPANT	NG	TITLPC
A141-215-1					
A141-215-2					
A141-215-3					
A141-215-5					
A141-215-12					
A141-215-13					
A141-215-14					
A141-215-15					